

Energetic Additive Transmutation of Zirconium in Bulk via Combination of Soliton and Proton Bombardment for Rare Earth Element Production

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Introduction

The loss of access to extant supplies of REEs has critically threatened the ability to manufacture vital computer components. A variety of Rare Earths, the most prominent among them being palladium, are required for the manufacture of computer chips. The supply of palladium, which would have otherwise been exhausted with or without global hoarding of supply, is now critically underavailable due to this competition.

Novel mining methods are highly promising and desirable, particularly methods which enable the liquefaction of solid Earth coupled with photomagnetic propulsion. While the referenced method would reduce the cost of mining newly discovered deposits and would open up the possibility of mining at unprecedented depths without needing to excavate the above Earth in order to retrieve ore, these technologies remain experimental and theoretical, respectively.

Transmutation of the elements provides one possible long-term solution to this problem. Any transmutative solution would have to be scalable and sufficiently productive to meet manufacturing needs domestically.

As the elements required fall squarely in the mid-range of the periodic table, fission, even with odderonic stabilization, would be an impractical approach. While silver could, in theory, be turned into palladium by way of knocking a proton off using a neutron gun, this would produce a single palladium atom at a time and would require fission-preventing stabilization fields (odderonic) which are beyond our current capabilities and would not produce yields sufficient to manufacture even a single computer chip.

Abstract

The natural formation of elements heavier than zinc occurs not in the collisions between neutron stars, as has been suggested by many mainstream astrophysicists, but rather, these elements form over millions of years within the Earth itself under conditions of intense pressure in saltwater chambers beneath the floor of the oceans.

Intense pressure combined with self-agitating action of saltwater cause H₂O molecules to be pushed against various elements with sufficient force that, when rare alignments of electrons permit it, allow for the hydrogen component of water to be shoved through the electron cloud of extant elements. When the

electron cloud returns to a more standard configuration, it acts as a sort of guillotine which severs the hydrogen from the water, resulting in both the generation of a new element and a basis molecule for a hydrocarbon. This is an incredibly slow process, but it is a process which can be accelerated artificially. *The presence of helium within methane deposits is proof positive that this is how heavy elements form rather than neutron star collisions.*

The use of machines to re-create these intense pressures would be impractical and would only enable the synthesis of new elements at the terrapin-slow pace allowed by nature.

However, two artificial mechanisms may be used to drastically accelerate this process, particularly given the aforementioned understanding of that fundamental process.

If all that is needed to enable a new element to be synthesized is for an electron cloud to, at least on one hemisphere, get out of the way as it were, a soliton wave could cause them to do this. Soliton waves may be large or small, but for industrial applications, a large soliton wave generator could be manufactured to enable a large containment vessel of an abundant element such as zirconium to undergo *periodic hemispheric electron parting* on the order of about 100,000 times per second. This is something I have discussed at length in other publications and it has many applications.

This, when coupled with the addition of high-pressure hydrogen gas (high pressure being defined as perhaps 2-3 bars,) would promote the rapid generation of new elements. This process would be so rapid, in fact, that in a matter of hours, a large volume of zirconium could be transformed into a mixture of elements in the palladium group. The only prerequisite beyond those already outlaid would be that the base material (zirconium) would need to be atomized as much as possible prior to going through the reactive process, with sufficient aeration to ensure that hydrogens may interact directly with the zirconium. After a period of reaction, the material generated would have to be processed in order to separate palladium from rhodium from niobium et cetera.

While hyperbaric conditions would not be absolutely required, they would enhance the process. As hydrogen would be highly combustible, it would be essential that oxygen be evacuated from the reactant chamber prior to the beginning of any reaction sequence.

Conclusion

If successful, this approach may eventually prove less costly than deep-Earth mineral extraction and in any case provides an avenue to enable continued access to coveted minerals even in a condition of global scarcity. This approach should be considered alongside other worthwhile endeavors such as the re-design of computers so as to eliminate the requirement for palladium more generally.